

27/04/09-12:25

4

US 08/809,620 (TE20081024)

Reply to OA on 04/30/08

→ Cassandra Spyrone
Art Unit 2800
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ENTERED CLAIMS FILED ON 6/28/01

The clean version with status indicator of the claims filed on 6/28/01 and accepted as "entered" is so the following.

Claims

- 1 (amended) - Optical device comprising a mirror and a device actuating the mirror, characterized in that the mirror and the actuating device are independent concave membranes (called membranous mirror and actuating membrane).
- 14 (amended) - Optical device according to claim 1 characterized in that the actuating membrane and the membranous mirror are made totally or partially of a material having shape memory.
- 15 (amended) - Optical device according to claim 1 characterized in that, for their folding, the concave actuating membrane and the concave membranous mirror are made quasi plane by the formation of concentric circular undulations obtained by a succession of centred distorsion alternately concave and convex, and the quasi plane one thus obtained rolled up on itself according to a diameter.
- 18 (amended) - Optical device according to claim 1 characterized in that the actuating membrane and the membranous mirror are obtained by material deposit on a liquid contained in a container rotating around a vertical axis.
- 19 (amended) - Optical device according to claim 1 characterized in that the membranous mirror and the actuating membrane have central and/or peripheral flanges
- 44 (new) - Optical device according to claim 1 characterized in that the distance between the actuating membrane and the membranous mirror is monitored permanently by capacitive coupling between said actuating membrane and said membranous mirror.
- 45 (new) - Optical device according to claim 18 characterized in that a ring, on which the materials constituting a membrane can be deposited, is fixed in a removable way on the revolving container, and in that the said ring allows the handling of the membrane.

All the other claims are considered as canceled previously.

The future amendments will be made from this claims listing under 37CFR 1.121(c)

27/04/09-12:25

4

US 08/809,620 (TE20081024)

Reply to OA on 04/30/08

27/04/09-12:25

5

US 08/809,620 (TE20081024)

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(7)

CURRENT AMENDMENT

Clean version with status indicator of the claims filed on 6/28/01 and accepted as "entered", with CURRENT cancelation of claim 45.

Claims

1 (amended) - Optical device comprising a mirror and a device actuating the mirror, characterized in that the mirror and the actuating device are independent concave membranes (called membranous mirror and actuating membrane).

14 (amended) - Optical device according to claim 1 characterized in that the actuating membrane and the membranous mirror are made totally or partially of a material having shape memory.

15 (amended) - Optical device according to claim 1 characterized in that, for their folding, the concave actuating membrane and the concave membranous mirror are made quasi plane by the formation of concentric circular undulations obtained by a succession of centred distortion alternately concave and convex, and the quasi plane one thus obtained rolled up on itself according to a diameter.

18 (amended) - Optical device according to claim 1 characterized in that the actuating membrane and the membranous mirror are obtained by material deposit on a liquid contained in a container rotating around a vertical axis.

19 (amended) - Optical device according to claim 1 characterized in that the membranous mirror and the actuating membrane have central and/or peripheral flanges

44 (new) - Optical device according to claim 1 characterized in that the distance between the actuating membrane and the membranous mirror is monitored permanently by capacitive coupling between said actuating membrane and said membranous mirror.

45 (canceled)

27/04/09-12:25

5

US 08/809,620 (TE20081024)

Reply to OA on 04/30/08

27/04/09-12:25

6

US 08/809,620 (TE20081024)
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Cancellation of claims 14, 18, 19, 44**Claims listing filed on 07/12/06 (but faxed on 07/17/06...)
(TE20060717b) page 7**

8

Working document with text of canceled claims, as original text.**07/12/06 Amendments CLAIMS (TE20060526)****1 (twice amended)-** Telescope optical device comprising a mirror and a device actuating the mirror.

characterized in that the mirror and the actuating device are independent concave free concave membranes (called membranous mirror and actuating membrane) without contact between them, or with an other device, free at their peripheries and tied by their central parts to the telescope..

14 (canceled)- Optical device according to claim 1 characterized in that the actuating membrane and the membranous mirror are made totally or partially of a material having shape memory**18 (canceled)-** Optical device according to claim 1 characterized in that the actuating membrane and the membranous mirror are obtained by material deposit on a liquid contained in a container rotating around a vertical axis.**19 (canceled)-** Optical device according to claim 1 characterized in that the membranous mirror and the actuating membrane have central and/or peripheral flanges**44 (canceled)-** Optical device according to claim 1 characterized in that the distance between the actuating membrane and the membranous mirror is monitored permanently by capacitive coupling between said actuating membrane and said membranous mirror.**45 (new) -** Telescope optical device according to claim 1,

characterized in that there are two levels of control to give at the free membranous mirror a perfect shape :

In a first level, an approximate shape is given to the free actuating membrane by interaction of a magnetic field tied to the telescope with magnetic fields generated by actuating membrane;

in a second level, a perfect form is given to the free membranous mirror by electrostatic interaction of the free actuating membrane with the free membranous mirror.

46 (new) - Telescope optical device according to claim 1,

characterized in that by use of the capacitive coupling between the conductive layer of the mirror and specific electrodes of the actuating membrane, the spread electronic integrated in the actuating membrane acts for the self-stabilisation of the shape of the system mirror-actuating membrane

27/04/09-12:25

6

US 08/809,620 (TE20081024)
Reply to OA on 04/30/08

27/04/09-12:25

7

US 08/809,620 (TE20081024)

Reply to OA on 04/30/08

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Art Unit 2800
9

47 (new - 15 twice amended) - Optical device according to claim 1 characterized in that, for their folding, the concave actuating membrane and the concave membranous mirror are made quasi plane by the formation of concentric circular undulations obtained by a succession of centred distorsion alternately concave and convex, and the quasi plane one thus obtained rolled up on itself according to a diameter for its folding, the concave membranous mirror is deformed by the formation of concentric circular ondulations obtained by a succession of centered distorsions alternately concave and convex, altering the pure concave surface of the membranous mirror in a circular surface comprising a series of circular centered waves whose the vertical crest to crest distance is so small as one wishes, in view of the number of waves so great as one wishes.

and in that the thin almost flat object so obtained is wound onto itself, forming a cylinder.

48 (new - 15 three amended) Optical device according to claim 1 characterized in that, for their folding, the concave actuating membrane and the concave membranous mirror are made quasi plane by the formation of concentric circular undulations obtained by a succession of centred distorsion alternately concave and convex, and the quasi plane one thus obtained rolled up on itself according to a diameter for its folding, the concave membranous actuating membrane is deformed by the formation of concentric circular ondulations obtained by a succession of centered distorsions alternately concave and convex, altering the pure concave surface of the membranous mirror in a circular surface comprising a series of circular centered waves whose the vertical crest to crest distance is so small as one wishes, in view of the number of waves so great as one wishes.

and in that the thin almost flat object so obtained is wound onto itself, forming a cylinder.

27/04/09-12:25

7

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